

What is claimed is:

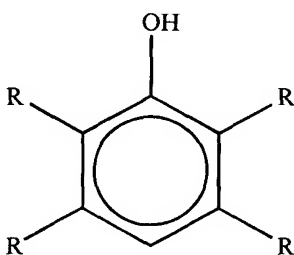
1. A method for preparing a brominated hydroxyaromatic compound which comprises contacting a hydroxyaromatic compound with oxygen and elemental bromine in the presence of a metal catalyst.

2. The method of claim 1, wherein one molar equivalent of said elemental bromine is added to at least two molar equivalents of said hydroxyaromatic compound, followed by addition of said metal catalyst and oxygen.

3. The method of claim 1, wherein one molar equivalent of said elemental bromine is added to at least two molar equivalents of said hydroxyaromatic compound in the presence of said metal catalyst, followed by addition of oxygen.

4. The method of claim 1, wherein one molar equivalent of said elemental bromine is added to at least two molar equivalents of said hydroxyaromatic compound in the presence of said metal catalyst and oxygen.

5. The method of claim 1, wherein said hydroxyaromatic compound has the formula



wherein each R is independently hydrogen or C<sub>1-4</sub> alkyl.

6. The method of claim 1, wherein said hydroxyaromatic compound is selected from the group consisting of phenol, o-cresol, and m-cresol.

7. The method of claim 6, wherein the hydroxyaromatic compound is phenol.

8. The method of claim 1, wherein said metal catalyst is selected from the group consisting of elemental copper, copper compounds, and one or more compounds or complexes of Group IV-VIII transition metals of the Periodic Table of Elements.

9. The method of claim 1, wherein said metal catalyst is a copper catalyst selected from the group consisting of cupric bromide, cupric sulfate, cupric chloride, cuprous chloride, or cuprous bromide.

10. The method of claim 9, wherein said metal catalyst is cupric bromide.

11. The method of claim 9, wherein a molar ratio of said hydroxyaromatic compound to said copper catalyst ranging from about 10:1 to about 200:1 is employed.

12. The method of claim 1, wherein said catalyst is selected from the group consisting of compounds of vanadium, titanium, molybdenum, tungsten, iron, and mixtures thereof.

13. The method of claim 12, wherein a molar ratio of said hydroxyaromatic compound to said catalyst ranging from about 1:1 to about 500:1 is employed.

14. The method of claim 1, wherein said catalyst is selected from the group consisting of sodium metavanadate, bis(acetylacetonate)oxovanadium, bis(acetylacetonate)oxotitanium, sodium molybdenum oxide dihydrate, iron bromide ( $\text{FeBr}_2$ ), tungstic acid ( $\text{H}_2\text{WO}_4 \cdot x\text{H}_2\text{O}$ ), and mixtures thereof.

15. The method of claim 1, wherein said contact is anhydrous.

16. The method of claim 1, wherein a polar organic solvent is also present.

17. The method of claim 16, wherein said solvent is selected from the group consisting of acetonitrile, dimethyl sulfoxide, chloroform, o-dichlorobenzene, water, phenol, o-cresol, m-cresol, propionic acid, and acetic acid.

18. The method of claim 16, wherein said solvent is acetonitrile or acetic acid.

19. The method of claim 1, wherein said oxygen is provided by air.

20. The method of claim 1, wherein flowing oxygen is employed.

21. The method of claim 1, wherein oxygen under pressure is employed.

22. The method of claim 1, wherein a temperature in the range of about 20-150°C is employed.

23. The method of claim 1, wherein a molar ratio of said elemental bromine to said hydroxyaromatic compound less than 1:2 is employed.

24. A method for preparing 4-bromophenol, 4-bromo-2-methylphenol, or 4-bromo-3-methylphenol, which comprises contacting phenol, o-cresol, or m-cresol, respectively, with air and elemental bromine, in the presence of cupric bromide.